Gull (Larus atricillu). The Gulls were the only birds on the island which had made any attempt at the construction of a nest, their eggs being deposited in rough low structures of dried vegetation and seaweed. In three cases the eggs were on the point of hatching, whilst in the fourth they were quite fresh.

The eggs of the Terns were for the most part well incubated, especially those of the Cabot's Terns, but I saw no young birds.

Several Frigate Birds (Fregata aquila), which had taken wing some time before, now circled high overhead. I do not think, however, they were nesting on the island.

Before exploring the next island I set out to stalk a flock of some ten small waders which I had noticed on a coral reef near by. They were very shy, but I was lucky enough to secure two which proved to be examples of Baird's Sandpiper (*Tringa fuscicollis*).

Chica Island is slightly smaller than Pajaros Island, near which it lies. On it we found a nesting colony of some fifty pairs of Blue-faced Boobies. The parent birds, particularly those with young, were absolutely fearless, and remained upon their nests snapping at us with their formidable beaks. We drove some of them off their nests, when they rose heavily into the air and circled round our heads. Many of the nests contained young birds a few days old, others two eggs, and several one egg only. We also came on some young birds which appeared to be about a fortnight old.

Specimens of Sterna fuliginosa, of Sterna sandvicensis acuflavida, and of Tringa fuscicollis from this locality have been presented to the British Museum by the writer.

## IV.—With the British Association in Australia. By A. H. Evans, M.A., M.B.O.U.

As the Council of the British Association were kind enough to include me in their list of members specially selected to attend the meeting of 1914 in Australia, it is almost a duty to give some account of my ornithological experiences in that wonderful Continent; and it may possibly be of interest to my fellow-workers of the B.O.U. to learn what birds are usually to be met with by a traveller in the early southern spring through the more temperate districts. At that season migration has hardly begun, so that the list must necessarily consist mainly of residents; while it must also be noted that a large number of the characteristic Australian birds, such as the "Native Companion," the Mound-builder, and the Emu, are inhabitants of the interior or of wild and difficult country, which can only be reached by special expeditions limited neither by time nor expense. It should, moreover, be remembered that many birds are necessarily overlooked in the foliage of the tall gum-trees by those who are pressed for time. Still it will be seen that I was able to observe no fewer than 128 species of the 395 assigned by Dr. Leach to Victoria in his admirable little book on Australian birds; and Vietoria is there stated to differ little from the whole Continent. if we exclude the tropical forms in Queensland and omit subspecies.

Leaving Southampton with my wife on June 24, 1914, I travelled by way of the Canadian Pacific Railway to Vancouver City, and thence to New Zealand, touching at Honolulu and Suva, where introduced birds alone can be seen about the towns. This was a great disappointment to one who had written on the Hawaiian avifauna, but was not unexpected; foreign Doves and Mynas were of course plentiful, but it was not until I reached New Zealand that I came across my first example of a native species. Fog delayed our boat for a whole day in Auekland Harbour, and so we were lucky enough to be able to take train through stretches of flowering gorse (introduced) and eabbage-palm swamps to the vicinity of Frankton, where we wandered to the foot of the neighbouring "ranges" and found a pair of the local Fantail (Rhipidura flabellifera) preparing to breed, besides seeing other birds in the distance.

From Auckland we proceeded direct to Sydney, arriving in its magnificent harbour on Sunday morning, August 2, six days before the Association held its first meeting at Adelaide. The praises of Australian hospitality have often been sung, but I must here add my voice to the chorus in no unstinted measure. No words of mine can possibly express the gratitude which I felt-and which every member of our party must have felt-for the manner in which we were treated; while the thoughtful preparations for our comfort, the admirable and inexpensive arrangements for our expeditions, and the universal kindness of our entertainers can never fade from our memory. A deputation headed by Professor Edgeworth David met us at the landingstage, and the Professor himself conducted several of us in the afternoon to the Botanical Gardens, where we were welcomed by the Curator, Mr. J. H. Maiden, the greatest of authorities on the Eucalyptus and Myrtle families. A large party cannot well study birds; so we postponed that pleasure for the time, and devoted our attention to the native flora, which is excellently represented in the Gardens.

The next morning (August 3) my wife and I left for Camden Park, formerly the residence of Mr. Macarthur, the pioneer of the merino-wool industry in the country. Here we were introduced to the Australian avifauna under the most favourable auspices. Our friend and hostess, Miss Macarthur Onslow, proved to be no mean expert in ornithology; while her brothers and her cousin, Mr. Foote Onslow, aided us in the kindest way in our investigations. The Park, long noted in New South Wales, is of great extent and diversity: it comprises creeks and lagoons, pastures and peach-orehards, groves of "box" and other Eucalypts, with large wooded gardens round the actual residence. which contain many fine specimens of uncommon trees Birds were thus naturally plentiful, even and shrubs. though the southern summer had not yet begun. The main feature in an Australian landscape is, of course, the gumtree (Eucalyptus of many species), but in spring the glories of the various flowering wattles (Acacia) are even more conspicuous, and the Wattle is as much an emblem of the flora as is the Emu of the avifauna.

But to return to our birds. The place of the Robin of our gardens was here filled by the brilliant "Blue Wren" (Malurus cyanochlamys), of which several males were in possession of the lawn, each accompanied by a small bevy of brown females. These lovely little blue-and-black songsters were common at Camden, as elsewhere, and bred in the bushes bordering the grass; but none of the nests were yet occupied. The Brown Flycatcher (Micraca fascinans) and the Willie Wagtail (Sisura inquieta) were perhaps the most prominent of the other small birds which we were beginning to recognise, while a quantity of old nests of a Fineh (? Stagonopleura guttata) almost filled a most thorny bush at one extremity of the actual garden. It was a great pleasure to hear for the first time the sweet voices of the Mistletoe- and Diamond-Birds, though both were at the tops of high trees and difficult to see; they were accompanied by White-eyes (Zosterops carulescens) and the first members of the great family of Honey-eaters (Meliphagidæ) that we had seen, which were no doubt chiefly "Greenies" (Ptilotis penicillata). Later in the day the notes of that characteristic Australian species, the Kookaburra or "Laughing Jackass" (Dacelo gigas), were heard in the distance, varying from low gurglings to loud guffaws, but always unmistakable and most striking to a new-comer. This Kingfisher is most noisy in the evening, but almost equally so in the early morning; parties are constantly seen sitting on the same branch or on a telegraph wire, but when they cry they commonly separate and answer one another from a distance.

Next day, soon after sunrise, we were awakened by the loud melodious notes of the "Black Magpie" (Strepera graculina) and the Black-backed "Magpie" (Gymnorhina tibicen), which quite overpowered those of the other songsters. The Black Magpie was common and most conspicuous as it flew from tree to tree in fearless fashion; unlike the

Gymnorhina or Crow-Shrike, it is only seen at Camden on migration, and appears to withdraw to the nearer hill-ranges to breed. It is a fine bird, and we seem to have been lucky to find it in numbers and hear it to such advantage; the other species we met with subsequently, and were never weary of their musical eries. Butcher-Birds were rare in the Park, but we were taken to listen to the song of one which always performed at the same place. It was probably Cracticus destructor, but we could not identify it and had to be content with admiring the full liquid notes. We ought to have heard "Thickheads," which, however, failed us. We had here our first glimpse of a Parrot—the Rosella (Platycercus eximius),—but not sufficiently close to distinguish the fine colours. In addition, we noted the Native Thrush (Colluricincla harmonica), whose splendid song gains it the name of "Harmonious"; while it may be remarked that in various parts of Australia, about the towns and their environs, we not uncommonly met with the introduced Sparrow, Starling, Blackbird, Thrush, Greenfinch, as well as the Indian Turtle-Dove and Myna.

The same morning Mr. Foote Onslow was good enough to escort us over the nearer parts of the property. Circling over the distant paddocks was a fine large Buzzard or Harrier—perhaps Circus assimilis—which we never saw at close quarters; a Heron (Notophoyx novæ-hollandiæ) winged its way across the neighbouring creek; and some half-adozen Peewees or Magpie-Larks (Grallina picata) kept rising from the grass. These birds are near relatives of the Shrikes, and build in the trees a very peculiar mud nest, whence they are also called "Mud-Larks"; but with their heavy flapping flight and shrill eries they take the place in Australia of the European Lapwing. A visit to a small lagoon some mile distant introduced us to several more species. By a stroke of uncommonly good luck, a fine Sea-Eagle (Haliaëtus leucogaster) happened to be floating in the air over the water, and was hardly disposed to move off on our appearance; Moorheas (Gallinula tenebrosa) and Black Ducks (Anas superciliosa) were disporting themselves in their element; a couple of White-breasted Cormorants (Phalacrocorax gouldi) were fishing near the shore; and two Hoary-headed Grebes (Podiceps poliocephalus) kept diving and re-appearing as we approached. Our return to the house was less eventful, but we came across one more species that was new to us—the Brown Tree-Creeper (Climacteris picumna), which was clinging to the bark of one of a magnificent grove of "box" trees; we also renewed our acquaintance of the previous afternoon with the Scrub-Tit (Smicrornis brevirestris).

No remarkable birds crossed our path the next day, which was chiefly devoted to botany at the Cataraets, or huge up-country reservoirs, which supply Sydney with water: the heath-like *Epacris* (red or white), the pink Boronia, the curious Hakeas and Grevilleas were alone enough to occupy our attention; but it was hardly the wealth of early-flowering plants that made us fail to observe the avifauna, for the noise of our motor on the hard rutty roads was quite sufficient to scare any number of birds. An English motorist would think these tracks impossible.

The following afternoon we drove to call on a neighbour amid fields bordered by masses of the brilliant "Black Aeacia" of the district, which was in full flower. We saw small flocks of Rosellas, heard a Boobook Owl as we returned in the dusk, and were fortunate enough not only to observe the White-throated Tree-Creeper (Climacteris scandens) but to hear its shrill cry, while we were admiring the scenery at a small ravine.

So ended a most delightful and instructive visit; for we were obliged to bid farewell to our kind entertainers early the next morning and hurry off to catch the train to Sydney. There arrangements had been made to transport us to Adelaide in time for the first meeting on August 8. The second meeting was at Melbourne, the third at Sydney, the fourth at Brisbane. Social gatherings were, as a rule, cancelled, owing to the declaration of war with Germany; but the scientific arrangements held good, so far as Australia was concerned. Everywhere men were enlisting

and forming camps: the patriotism of the Southern Continent is a lesson we may well take to heart, and for which we must never fail to be unceasingly grateful to our kinsmen across the seas.

The arrangements for our comfort at Adelaide were as complete as elsewhere, and we were personally indebted to the unvarying kindness of our host, Mr. F. A. Simpson, and his wife, who had even corresponded with us in England with a view to furthering our scientific explorations. Business meetings occupied a good deal of time during the four days of our stay, but Mr. Simpson had made all preparations for a day on the Upper Sturt River, and had invited Dr. Morgan, the well-known oologist, to accompany us. Captain White was absent on an ornithological expedition, so we had not the pleasure of making his acquaintance. Early on August 9 we took train for the station nearest to the river, and were almost at once descending the scrub-covered slopes that led to the water. Here we renewed our acquaintance with the commoner birds seen at Camden, but did not meet with any new Meliphagine species, which our experience of the next two days shewed to be common at that time of year on the flats above. Diamond-Birds were flitting about the tree-tops, and we soon fell in with small companies of Greycrowned Babblers (Pomatorhinus frivolus), the "Twelve Apostles" of the country-folk-so ealled from the usual size of the flocks. They were common and tame, though somewhat local, and were presumably preparing to breed, as they were busy about the low bushes, and some of the many nests we found seemed to be made of fresh materials. This was, however, difficult to prove-firstly, because the sticks and leaves which enter largely into their composition are dry and not green; secondly, because we found no eggs. Each pair builds several large domed nests, but only uses one for its nursery. On reaching the river we had our lunch among the tea-tree serub that fringes it, and were able to admire at leisure the splendid growth of the huge red gums, which flourish best at damp low

levels. Many other trees and shrubs were quite new to us, among them the curious "grass-tree" (Xanthorrhea), which was pretty common on the barer slopes. Birds were not particularly abundant, but we had splendid views of three fine "Robins," as they are termed in Australiathe Scarlet-breasted (Petraca leagei), the Flame-breasted (P. phanicea), and the Black-and-white or Hooded (P. bicolor). They were seen sitting singly on low branches, after the fashion of the English Robin, and permitted a fairly close approach, but were very quiet and hardly uttered a sound. We also observed the "Yellow Robin" (Eopsaltria australis) in similar situations, but it also was mute, and evidently the "Robins" as a whole did not believe that spring had fully arrived. The track along the waterside was very rough and strewn with boulders, while little eaves, of no great depth, occurred here and there in the low rocks on the right hand. In one of these we discovered a number of old nests of the Fairy Martin (Petrochelidon ariel), also called "Bottle-Swallow" from its retort-shaped mud nests, which are built in colonies under shelter. The Martins themselves had arrived, but had not yet begun breeding; so we did not see them till later. As we struggled through the rough ground above the ravine which we finally ascended, we flushed a couple of Little Quails (Turnix velox) from the low vegetation. largely composed of a Grevillea and a heath-like Epacris in full flower, while a solitary Bush-Lark (Mirafra horsfieldi) rose at still closer quarters. We then made for the road to Blackwood, and reached that station without further adventures, though we added to the list of birds identified the South Australian form of the Rosella Parrot.

The next day we accompanied a large party which visited the Tammda Company's brandy manufactory, and had little opportunity for ornithological work, though we heard for the first time the fine song of the Rufous-breasted Whistler or "Thickhead." Here I was lucky enough to meet that well-known bird-lover, Mr. Edwin Ashby, who gave me a most cordial invitation to visit him at his

residence, Wittunga, near Blackwood, and, as will be seen, was the means of my making the acquaintance of several rare species which I should otherwise have missed.

I went alone to Blackwood by an early train on August 11, and was received with the utmost hospitality by Mr. Ashby and his family, who live in a district still partly covered by serub, though unfortunately falling into the builders' hands. The garden at Wittunga is large, filled with fruit trees and flowering plants, and fringed by a belt of virgin soil still carrying a natural growth of Eucalypts, which are a great resort of the Meliphagidæ. On and round the house Mr. Ashby and his son pointed ont the breeding-sites of several species of birds already known to me, and shewed me the actual nests of more than one pair of the White-bearded Honey-eater (Melioruis novæ-hollandiæ) in small trees or bushes. This bird must lay its eggs very early in the year, for all were hatched and the young were actually fledged, though the Narrow-billed Bronze Cuckoo had only just made its appearance and was not heard to full advantage. We next proceeded to examine with the aid of field-glasses the birds which were flying to and fro or flitting about the tops of the highest Eucalypts; this was very necessary, for the numbers and the species appear to vary from day to day at this time of year. Naturally, if alone, I should have been somewhat uncertain of my identifications; but here the aid of Mr. Ashby and Mr. W. B. Alexander of the Perth Museum, who was staying in the house, was of the greatest assistance. The White-plumed Honey-eater or Greenie was familiar, but I had not yet met with the White-naped Honey-eater (Melithreptus atricapillus), which was not uncommon, the Black-chinned Honey-eater (M. gularis), the Spine-billed Honey-eater (Acanthorhynchus tenuirostris), or the Tawny-crowned Honey-eater (Glycyphila melanops). In a low fruit-tree a Brush Wattlebird (Anellobia chrysoptera) was sitting on two eggs; the Striated Tit-Warbler (Acanthiza lineata) was seen with Zosterops carulescens and other common species near the stables; and I feel sure that it was here that I saw the

Yellow-rumped Thornbill (Acanthiza chrysorrhoa) and its unoccupied nest. Finally, we examined some tall old scrub near the station in search of the rare Swift Parrot (Euphema discolor), the presence of which had been reported to Mr. Ashby. It occurs comparatively seldom in the neighbourhood, and we considered ourselves most lucky to be able to observe two examples at close quarters, feeding in company with Musk Lorikeets (Glossopsittacus concinuus) on the early-flowering Eucalypts. Rosellas also were rather plentiful: eleven out of every twelve of the Parrots we saw in Australia were Rosellas.

A still further stroke of luck awaited me. Mr. Ashby's son had come across the glorious Regent Honey-eater (Meliphaga phrygia) in some primeval scrub about a mile from the house, and his father was very anxious to find the nest and eggs, which even he had never seen. We therefore made for the spot across newly-ploughed land, where a couple of White-fronted Chats (Ephthianura albifrons) were feeding among the clods, and before long heard the fine ringing cry proceeding from a thicket of sapling gums. Before long we located a pair of birds, and after a short search discovered the nest. It was about half completed and hardly lined, the material used consisting, as in so many other cases, of dry leaves. Mr. Ashby subsequently obtained the eggs for his collection; while another pair bred near the stables. Probably this species may not nest at Blackwood again for many years. As we returned through the taller scrub, the musical notes of the Yellowbreasted Shrike-Tit (Falcunculus frontatus) fell upon our ears, and we had an exciting and successful chase after one of the prettiest of the rarer birds of Australia, which finally made up its mind to exhibit in full snnlight its brilliant vellow, black, white, and green colours. Our host hoped to have introduced us to the Friar-Bird, and we did just eatch glimpses of the Red Wattle-Bird and White-backed Magpie (Gymnorkina leuconota), whose fine song is one of the characteristic sounds of the countryside. I was very unwilling to leave my kind entertainer, and had

little leisure to examine the wallabies and other animals in his outside pens; but my time was limited, and I was forced to hurry off to catch the last convenient train to Adelaide. The next day (August 12) was fixed for our departure for Melbourne, the travelling, as usual, being chiefly by night. We had not even time to visit the Adelaide Botanical Gardens, but managed to reach the nearest part of the river, where many Black Swans were sitting on their nests on the small islets that appeared above the waters, and gaudy Purple Gallinules (Porphyrio melanonotus) were flushed here and from the sedge-coverts on the banks. There were other common water-birds in some numbers, and we saw for the first time in plenty the Welcome Swallow (Chelidon neovena).

At Melbourne work was again the order of the day. My wife and I were received with the utmost hospitality by Mr. and Mrs. Cain of South Yarra, their daughter, and two sons, an Oxford and a Cambridge graduate respectively. Dr. Leach, Editor of the 'Emu,' Mr. Dudley Le Souëf of the Zoological Gardens, and last, but not least, our old ally and Colonial Member, Mr. A. J. Campbell, were also busy on our behalf; while I look with pride upon the fact that I was elected an Honorary Member of the local Field Club, at a meeting which I and my friend, Mr. George Herdman, were specially invited to attend. As 1 returned to Melbourne later, I must here content myself with a brief reference to an afternoon excursion kindly arranged by Mr. A. J. Campbell to a lovely valley which is a regular place of pilgrimage at this season for gatherers of Acacia, a trip to Black Rock with Mr. Robert Cain, one to the Golf Links with his brother, and an exciting motor-drive over impossible hill-tracks past Fern-tree Gulley in the direction of Warburton. With Mr. Campbell's party, which included the General Secretary of the Association. we saw several of our old favourites, such as the Yellow Robin; one member reported a Ground-Thrush (Turdus lunnlatus); and all of us watched with interest a pair of Brown Tit-Warblers (Acanthiza pusilla) busily building their nest

in a wayside bush. On the sea at Black Rock we expected to meet with one, if not two, of the smaller Penguins; but the weather was, unfortunately, too calm to drive them in, though Gulls (Larus novæ-hollandiæ) and Terns (Sterna nereis) were observed in the offing. On the shore we had better luck, for after some trouble we identified several White-browed Scrub-Wrens (Sericornis frontalis) lurking on the ground under the bushes, and satisfied ourselves that two or three very dark Honey-eaters flitting along the gum-trees by the roadside were the Black Honey-cater (Myzomela nigra). If we were right, they were probably on migration. At the Golf Links we saw a Raven (Corvus marianae), a few Crows (C. coronoides) and Pipits (Anthus australis), and a Lark (Alauda arvensis). The motor-drive produced little until evening. We walked up Fern-tree Gulley without seeing anything of special interest, though we were on the look-out for the Pilot-Bird (Pycnoplilus tloccosus) and Lyre-Bird (Menura victoriae). Probably it was a little early in the season for many species, and certainly we had not half time enough to examine even the scrub close to us. In the wooded lands towards Warburton we heard many a song, and hunted several likely spots for Lyre-Birds' nests; but we were not fortunate, and were only able to be sure of the beautiful notes of more than one Honey-eater as yet unknown to us, and unluckily undeterminable. In fact it was getting dusk, and colours did not shew up. The whole place, however, swarmed with Kookaburras, and we greatly enjoyed the musical chorns with which they provided us. We had crossed right over the Ranges in most levely scenery, with steep ascents and descents, amidst rough scrub with little cultivation and occasional patches of tree-ferns; but we had to hurry back by a longer and more level road, in order to reach Melbourne before dark.

The fine Zoological Gardens of that city provided much that was of interest—water-fowl, in particular, and two Lyre-Birds in one of the aviaries. We only regretted that there was not time to visit them more often, and to remain till evening, when wild birds, such as the Nankeen Night-Heron (Nycticorax caledonicus), come in to roost. The Association was entertained one afternoon in the Botanical Gardens by a distinguished company, including our ornithological friends, and it was here that we first met Dr. Leach, who kindly presented us with a copy of his little book on Australian birds, which proved to be invaluable subsequently in the Murray-Goulburn district. In these Gardens the Crimson Parrot (Platycercus elegans) was not an uncommon sight; while on the lake there were many of the commoner water-birds, and on a stream that fed it a very tame pair of Black-and-white Fantails (Rhipidura motacilloides), which apparently meant to breed there.

On August 19 we departed for Sydney, provided with an introduction from Mr. Dudlev Le Souëf to his brother, Mr. A. S. Le Sonëf, Director of the Zoological Gardens. Consequently we made it our first object to explore them, after depositing our baggage at the Sydney Hotel, where we were the guests of Sir Philip Sydney Jones. We shall always remember with gratitude the trouble Mr. Le Souëf took on our behalf: he gave up almost the whole day to our interests, and conducted us in the first place over the present Gardens. There we saw many species in the aviaries and on the ponds which we did not meet with elsewhere; admired tame Honey-eaters which fed from our hands, and Doves sitting on their eggs at our feet; and had our first sight of the Coach-whip Bird, after dodging it for some minutes round a bush in one of the enclosures. Naturally we were much delighted with all these opportunities, but they paled before the light of our experiences in the afternoon, when we crossed the Harbour with our mentor to the site of the new Zoological Gardens. This is a perfect paradise for birds, and will, I believe, long continue to be so. There are a few new villas and recently made roads near at hand, but the Gardens themselves resemble a spacious park and are full of wild life. On one side they rise with a steep bank from the Harbour, on the other they fall away into ravines of different sizes:

while the intermediate ground is at present covered by old scrub, where it has not been found necessary to clear it, and is more or less a wild table-land cut up by ridges and sheltered depressions. A few animals have already been brought over from the old Gardens and relegated to temporary apartments; but the native birds are the chief charm of the place and accord well with the native plants which Mr. Le Souëf, with admirable judgment, alone admits to his sanctuary.

We crossed the Harbour by a ferry, and took a slanting path up the bank, meeting at once with old friends and new. Close to the water, on a sapling gum, a pretty Honey-eater was disporting itself, which we had no difficulty in identifying as the White-eared species (Ptilotis leucotis); and we had hardly finished watching it, while listening to its clear notes, when our conductor pointed ont a neat little round hole in the bank of a dry watercourse and told us that it belonged to a Diamond-Bird (Pardalotus punctatus). The earth was so friable that we were able to remove and replace it without damaging the small round nest of Eucalyptus bark, which contained three transparent white eggs, resembling those of the Kingfisher in miniature. Cuckoos of more than one kind were calling in the scrub, since migration-time had fully arrived, and amongst them we made out the Pallid Cuekoo (Cuculus inornatus), uttering its ringing notes. But we had a much better sight of the Fan-tailed Cuckoo (Cacomantis rufulus), for, as we were listening to its mournful trill, the bird suddenly dashed across our path and, turning at right angles, settled in full view on a sapling, with its back towards us and its tail expanded. We were soon at the top of the main slope, where the menagerie is being gradually housed; but we passed quickly over the partly reclaimed ground into the woodland beyond. Here a plaintive note attracted our attention, which our guide believed and hoped to be that of the rare Black-eared Cuckoo (Mesocalius palliolatus). He proved to be quite correct: but we had considerable trouble in approaching the restless creature, which finally took up its station at the top of a tall leafless tree within easy range of our binoculars. Tit-Warblers, Thornbills, White-eyes, Blue Wrens, and other species were fairly abundant, while a bird which would not be induced to leave a thicket may have been a Ground-Wren, though it was more probably the Scrub-Wren (Sericornis frontalis); we were also lucky to meet with a "Blue Wren" that was new to us (Malurus lumberti). It was now dusk, and we were reluctantly obliged to forego further researches.

When in the town the business of the Association kept me from visiting the Museum, and I much regretted not being able to make the acquaintance of that eminent ornithologist Mr. A. J. North, while a trip by tramway to Botany Bay was too hurried to have any worthy results. On Sunday, August 23, however, Mr. Le Souëf added to his kindness by arranging for an expedition to the National Park in company with a friend and his wife. This sanctuary of the animal life of New South Wales is an immense tract of country on both sides of a fairly broad river. A good road leads to it, and there is a "rest-house" where visitors can stay; but most people seem to use it as a resort for day excursions, and reach it by one of two railway stations which are within easy walking distance. The scenery is splendid and doubtless varied; while the portion near the hotel, which alone we visited, consists of perfectly primeval scrub-land, rising from the sides of the water to a very considerable height. The Park, as seen from the station road, gives the impression of a spacious wooded valley. Our new friends' motor would not hold all our party, so Mr. Le Souëf and I journeyed by train, to meet the others at the hotel. As we descended by a steep road from the station we kept a sharp look-out for Rock-Wallabies on the low cliffs, while we were constantly on the alert for a possible sight of the rare Black Cockatoo (Calyptorhynchus funereus) and King-Parrot (Aprosmictus cyanopygius), which occur in the neighbourhood. However, we had no luck with regard to any of them, a fact probably due to the presence of Sunday holiday-makers and the few hours at our disposal. But we had no reason to complain of our fortunes in other respects. First, we were shown a previous year's nest of the local Lyrc-Bird (Menura superba), which was in a state of good preservation; it was built among low vegetation on steep ground just below the brow of the actual bank of the river and was quite accessible. Such appears to be the natural site for the bulky domed structure of stick, bark, and roots, which is fairly easy to see at close quarters, but difficult to find in acres of scrub. In many of the districts, however, that this splendid bird frequents, discovery is made more simple by its acquired habit of building in the head of a tree-fern, where foxes are less likely to hunt. Midday is not the proper time to hear the Lyre-Bird and admire its powers of mimiery, which it exercises chiefly in the early morning and evening; so we considered ourselves fortunate even to hear its notes in the distance, as we did on our return journey to the station. Later it will be seen that I had full compensation for my disappointment when I visited the Poowong country in Gippsland.

We spent a considerable time in a subsidiary gully looking for a new nest, as a pair of birds commonly came to feed there with the custodian's fowls in the early part of the day; but we were unsuccessful both in this respect and in our attempt to locate a pair of Coach-whip Birds, which were unusually silent and characteristically skulking. Taking a boat we then rowed quietly upstream for nearly a mile, and were rewarded by the sight of a Blue Kingfisher (Aleyone azurea) sitting motionless on a low bough, where it displayed to great advantage its azure upper and orange under surface; we also disturbed a couple of Blackthroated Grebes (Podiceps novæ-hollandiæ) at a bend in the stream, and had an excellent view of the uncommon Wonga-wonga Pigeon (Leucosarcia melanoleuca) stealing up the sloping trunk of a falling tree. We lunched on shore at a spot well situated for bird observation, and there searched other gullies and banks without coming across

any species that was new to us, our chief wish being to discover a bower of the Satin-Bird (Ptilonorhynchus violaceus). We did not succeed in this, but had no doubt that the playground was not far off, as a hen-bird passed fairly close to us while we were resting. We should have much preferred a sight of the lovely blue-black male, but even the green female was hailed with delight.

Our greatest success, however, was yet to come. Before we returned to the boat Mr. Le Souëf suggested that we should examine the little caves along the neighbouring bank, where he had in former years observed the Rock-Warbler (Origma rubricata), a species entirely confined to New South Wales. Hardly had we begun our search when he stopped and pointed out a nest. To an Englishman this little bird at once recalls the Dipper, for it frequents stony water-courses, hops about the boulders, and builds an oval nest in rocky places, where it lays pure white eggs. But it is less aquatic, and breeds in a cave or under some overhanging ledge. Our nest was situated, as is most usual, in a small cave of no great depth, and consisted of a ball of roots and moss, within which three eggs, resembling those of the Wryneck, reposed on a warm lining of feathers. The structure was suspended from the roof of the cave by a string of fibre, which seemed hardly strong enough to support the lusty young birds, and this string was fixed or stuck in some extraordinary way into the smallest of crevices in the roof. Evening was now at hand, so that we were reluctantly obliged to make for the boat and think of our homeward journey, after one of the most enjoyable expeditions in which we had ever taken part.

The following two days were more or less wet and misty, but the next morning I spent in the Sydney Botanical Gardens, chiefly occupied in watching several very tame birds, and in particular a Grass-Parrot (Psephotus hæmatonotus) feeding on the lawn. I had not yet seen one at such close quarters. In the afternoon we started for Brisbane, but, as I returned almost at once to Sydney, I need only say that I added to my list the Topknot-Pigeon (Lopholæmus antarcticus) and

the Wood-Duck (Chenonetta jubata) seen from the train, when I was vainly looking out for Emus on the journey through the Emu Plains, and the Sacred Kingfisher (Halcyon sanctus) in the outskirts of Brisbane itself. I made the acquaintance of Dr. Hamlyn Harris at the Museum, and inspected the fine collection of birds under the guidance of his head-assistant, but was unable to accept his tempting proposal to visit the neighbouring ranges in search of Pittas, Bronze-wing Pigeons, and other scarce species. During my short stay I was most hospitably entertained by the Hon. A. J. Carter and his family, who added to their kindness by looking after my wife till her ship started for the Malay States. On account of the War, the Home Government had taken over many of the Australian liners, and their action gave me a further ten days in the country.

Consequently I telegraphed to accept a provisional invitation of the Cains to visit their son William's station up the Murray River, and to arrange, if possible, for a couple of days in Gippsland. The latter was made possible by the skilful management of Robert Cain and Mr. C. L. Barrett of Melbourne, who sent me with an introduction to Mr. L. C. Cook of Holbrook, near Poowong, well known for his writings, published in 'The Emu,' on the Lyre-Bird and other uncommon denizens of the scrub. My most cordial thanks are due to all these friends for the way in which they met my wishes, cared for me at Melbourne, or guided me over the districts in which they resided.

I left the capital for Echuca on the afternoon of September 2, and spent the night at that small town, while in the morning I had ample time to investigate a grove on the nearest part of the river. It contained several Honeyeaters and Parrots that I had met with previously, and I watched for an hour some birds, which I failed to identify with certainty, flitting about the tops of the highest gumtrees. I took them to be Bell-Miners (Manorhina melanophrys). There was no doubt, however, about the Noisy Miner (Myzantha garrula), though I only noticed

one pair, which were busily engaged in laying the foundation of their nest with dry leaves in a sapling. On them I spent most of the morning. Towards midday William Cain arrived, and soon after lunch we drove off to his station of Madowla Park, having paid a further visit to the Noisy Miners. Many Grass-Parrots and Rosellas in small flocks were disturbed from the roadside as we passed, first through cultivated land and then through wilder serub country; but we had no time to alight and hunt for birds, as we had to cover something under twenty miles before dinner time.

Madowla Park lies in the fork between the Goulburn and Murray Rivers. It comprises big paddocks for stock, irrigation-land fed by channels from the Murray which are filled by a pumping engine, and wide stretches of barren ground varied by occasional belts of timber of no great extent. Gardens surround the house, which looks out on a creek or lagoon of considerable length and breadth. At the end of the property in one direction lies the Murray, hordered by tall gum-scrub above its bare mud-banks. Consequently there is no lack of suntable localities for birds of many sorts, and the avifanna is rich and varied. I could not have had a better field for my researches, while my kind host was uncommonly interested in my pursuits and entered into them so warmly that he gave up nearly the whole of his time to accompany me.

Even the immediate surroundings of the buildings held much of interest. The kitchen-garden was only remarkable for Greenies and so forth, but the flower-garden, which was fringed with tall gums and was full of orange trees laden with ripe fruit, was the haunt of Diamond-Birds, Parrots, and a couple of pairs of the Harmonious Thrush, apparently seeking a site for their nests and generally in full song. A strip of this flower-garden continued in front of the house by the side of the lagoon, and here the water below the shrubs was edged with a growth of sedge, where I understand that the Reed-Warbler (Acrocephalus australis) breeds later in the year. A pair of Black-and-white Fantails (Rhipidura motacilloides) were often observed

playing about the roof of an outbuilding, and not very far off were a couple of Restless Flycatchers (Sisura inquieta), but neither species seemed to be breeding. In severe weather Diamond-Birds roost under the verandah, but they had already left, and only Sparrows remained.

The morning after my arrival (September 4) my host and I started for the irrigation-lands, which were just in sight of the house. Passing along the lagoon we disturbed Moorhens, Coots, and Black Ducks, and (what was more to the purpose) a small company of five Straw-necked Ibises (Carphibis spinicollis)—a good angury for the occurrence of uncommon species. We first sighted them standing in the shallows, but were able to approach near enough to examine them with field-glasses. Then we walked down the banks which controlled the irrigation to an enclosure with water still lying on it, where we were at once attracted by a flock of moderate-sized birds running in and out of the mud and water among a number of Peewees and Crows. As they always moved away from us it was some little time before we obtained a really good view, when they proved to be Black-fronted Dotterels (Ægialitis melanops). A hunt for the nest of a Brown Tree-Creeper (Climacteris picumna) in a rotten stump was unsuccessful, though a bird we saw climbing about it caused us to suspect that its mate was incubating; but we soon after had better luck in meeting with the Orange-winged Nuthatch (Neositta chrysoptera). There were plenty of "Magpies" (all, I believe, Gymnorhina leuconota), and we were shown an old nest, with fencingwire as its chief constituent. When the sun began to trouble us we retired to the shade of a row of small gum-trees and sat down to watch. Just as we were settling down a Black-faced Cuckoo-Shrike (Coracina robusta) flew past and pitched on a tree not far off, so we were obliged to get up again and steal within the range of our binoculars. Hardly had we decided upon the species and resumed our seats when a bird with a loud monotonous call perched right above us, but was difficult to identify in the thick foliage.

It proved to be a species that I had not seen before, the Blue-faced Honey-eater (Entomyzon cyanotis), one of the prettiest of a beautiful family. After the lapse of a few minutes Parrots also began to arrive, old friends for the most part, but accompanied by the Mallee Parrot (Burnardius barnardi). We quite expected the Blue-bonnet (Psephotus xanthorrhous) also, but were never able to see it. An occasional Heron was observed as we wended our way back to the gardens, while the report that two White Ibises had been seen on the property made us again try the banks of the lagoon. And there they were, two fine examples of Ibis molneca feeding side by side in rather deep water. We purposely put them up after a few minutes, and enjoyed the sight of their flight as they passed very near to our shelter.

In the afternoon the chief sight was a splendid flock of Galahs (Cacatua roseicapilla) which lived on a paddock just outside of the front gate. On this home-field they were feeding like a flock of tame Pigeons, and resembled them in the way they rose grudgingly and settled again almost immediately. But there the likeness ended, for, as they circled round us, their rose-coloured breasts showed to the greatest advantage in contrast with their grey backs and pink-white heads, while their screeching cries were as characteristic as their wheeling flight and aërial evolutions generally. On the next pasture we put up a Pipit (Anthus australis) and several birds which at first puzzled us, but proved to be Brown Song-Larks (Cinclorhamphus cruralis), while we were accompanied for a considerable time by a pair of Spur-wing Plovers (Labivanellus lobatus). They were certainly on their breeding-grounds, but we could find no eggs, and probably they begin their excited wheelings while selecting their future nursery, just as their relatives the Peewits do in Britain.

The next day a Parliamentary Election took Cain to a neighbouring school, but the drive enabled me to see more of the country and also more of the familiar birds. Returning in the evening we stole quietly to the front of the house just before it became dark, as several species were accustomed to resort to a little fountain near our bedrooms to drink. We were precisely at the right time, for a lovely male Mistletoe-Bird (Dicæum hirundinaceum) was sitting on the rim and displaying his brilliant searlet breast, while a pair of Ground Doves (Geopelia placida) were making for the water. The former of these species is not easy to approach so closely, as it loves the very tops of the trees: the latter is distinctly rare.

On Sunday afternoon we took a drive over the bare flats beyond the irrigation-fields in search of Stone-Curlews (Burhinus grallarius), which we heard from the verandah every evening, simultaneously with Boobook Owls. The notes and habits of the former, so far as I could judge, were similar to those of our British bird, and the spots frequented were like our East Angliau warrens, though nearly bare of herbage and without flints. We flushed a single example in a narrow belt of seattered gum-trees and a pair on the open ground beyond, where I hunted for an hour or so for the eggs without success. They kept returning to the same place, but I do not think that the eggs had been laid. On the Murray banks I had my first sight of Wood-Swallows (Artamus tenebrosus), and was informed that the White-browed and Masked species occurred there, but arrived somewhat later. Before we drove back we had a splendid sight of a very large company of White Coekatoos (Cacatua galerita) which were feeding in a paddock. When disturbed they all flew up uttering appalling screeches, and settled on the low trees around, but soon took to the ground again, with a sentinel left on guard. In some ways they reminded me of a flock of Rooks, in others of Gulls feeding on ploughed land. A striking feature of the landscape at this point was a knoll covered with old Casuarinas ("she-oaks") shewing in strong contrast to the ubiquitous gum-trees.

The previous evening at dusk we had shot a specimen of a Parrot for determination—one of a small party that

regularly came to roost in the high gums by the lagoon, and had puzzled Cain before my arrival. It was chiefly blue and yellow, but did not seem perfectly in accord with any book description; so we forwarded it to Mr. Dudley Le Souëf, who kindly identified it for us as the rare Yellow Parrot or "Murray Smoker" (Platycercus flaveolus). This beautiful bird was our last prize, for the next day I had to hurry away-much against my will-from this paradise of birds, to catch the train at Echuca. Even on the return drive our luck held, for we had a splendid view of a fine Wedge-tailed Eagle (Uroaëtus audax) soaring above the woodland where it was known to breed, while we met with a flock of White-browed Babblers (Pomatorhinus superciliosus) playing about the road, a company of White-winged Choughs (Corcorax melanorhamphus) flitting about the scrub. and a solitary Brown Hawk (Hieracidea berigora) sitting motionless on a tree. Red-tipped Diamond-Birds (Pardalotus ornatus) were not new to me, but I was glad to see a pair at very close quarters as a final treat, before I said good-bye to my host at the station. His kindness and thoughtfulness I shall never forget, while I can only hope that he enjoyed our bird-watching as much as I did.

My thanks are equally due to his brother Robert, who again met me in Melbourne, with the news that all was in readiness for my visit to Gippsland. Early on September 8 I took train for Loch, where I was met by Mr. L. C. Cook and by him driven to Holbrook. There I found a whole family—wife, father, sister, and uncle—at my disposal. I hope that they will take my expression of gratitude to the Cains to refer in equal measure to them, and I can assure them that my final expedition was of equal interest to any that I made while in hospitable Australia. A meal was ready when I arrived at the farm, where I was introduced to Mr. Cook's relatives, and his sister and uncle accompanied us to the very considerable area of old scrub, which is known to the local ornithologists and all readers of 'The Emu' as the haunt of that curious and beautiful creature

the Lyre-Bird (Menura victoriæ). The scrub is chiefly on one side of a valley, into which we descended through a patch of ground denuded of its high trees, but still covered with bushes and dense vegetation. This upper part of the valley is a great haunt of the Coach-whip Bird (Psophodes crepitans), one of the species whose name really corresponds with its voice; and when my friends began to imitate its sharp "whip-crack" note, the birds joined in from all sides, while I was still under the impression that our party alone was making the sounds. In these lower saplings and bushes the Satin Bower-Bird certainly breeds, for some boys had taken two eggs the year before, which I saw at the farm, accompanied by that of the Lyre-Bird. The nest had been removed, but I saw the place where it had been built, in the fork of a sapling, after the fashion of our Jay. A bower, which probably belonged to the same pair of birds, was perhaps a quarter of a mile distant, but this had also been removed, as it was out of repair and the male had doubtless deserted it. We heard the Bower-Bird's notes when we were quietly watching the higher scrubs, but we never saw it on this occasion.

Passing below the shade of the trees we made straight for the part of the bank where Mr. Cook's well-known pair of Lyre-Birds live; there are at least two pairs in this valley, but one of them is much less fearless than the other, and hardly changes its breeding-place from year to year. We first inspected the huge nest built in the top of a sloping tree-fern, and the little blackish nestling, and then sat down close to it on the chance of a glimpse of the male; but though the hen soon came to keep us company, scratched about like a tame fowl within a few yards for the little snails on which these birds feed, and kept scrambling up and perching on a tree-fern stump to inspect us, while uttering a sort of querulous grunt, her consort was too wary to appear \*. We remained in these delightful surroundings for some time, and then I waited alone while

<sup>\*</sup> For a full account and photograph of this bird see "The Emu," vol. xvi. 1916, pp. 101-103.

the whole Cook family essayed a "drive" towards me from the lower edge of the scrub, hoping that the male, which prefers the ground except at nightfall, would run up into sight like a cock Pheasant. Apparently, however, he broke away-certainly he did not arrive; so, when the drive was over we hunted the scrub for nests. Miss Cook cleverly discovered an empty and well-hidden Lyre-Bird's nursery at the side of a little gully, and I came across a small structure, probably belonging to an Acanthiza; but evidently we were too early for eggs in general, while we did not discover any trace of a Bower-Bird's bower or of a Coach-whip Bird's nest. Finally, as evening drew near, we took up our position in a likely spot where Lyre-Birds were accustomed to perform. We soon were aware of at least three elimbing up the trees to roost, and one male was kind enough to run the whole gamut for my benefit. We often hear of the wonderful powers of mimiery possessed by these birds, but the reality almost passes imagination. Imitations of a dog's bark, a hen's cluck, or a saw in action are varied by studies of other birds' notes, the whole continuing for a considerable length of time. We were fortunate enough to hear our male cover almost the whole range of which he was capable; in fact, Mr. Cook said that he omitted only one item of his best performance. And then we bid farewell to this wonderful valley, and made the best of our way to Holbrook in the dark.

I was obliged to leave early the next morning, cheered by the voices of the Grey Bell Magpie (Strepera versicolor) and other species, after a most delightful visit spent in equally delightful company. On the way to the station we crossed a stream noted for the Duck-billed Platypus, though none were visible at the time, while we had a fine view of a row of Kookaburras sitting on the telegraph wires by the roadside. The previous day I had added to my list the Whistling Eagle (Haliastur sphenurus), seen soaring in the distance, and the Tawny Frogmouth (Podargus strigoides), which was incubating in the fork of a fair-sized gum-tree. The latter was a welcome and a curious sight, for the bird

looked as if it were perched or squatting in the fork as a Wood-pigeon does, and little or nothing of a nest was visible. My luck held right up to the station, for a couple of Longbilled Cockatoos (*Licmetis nasica*) flew over the road in full view not long before we reached our destination.

From Melbourne I took the evening train to Adelaide, where I had time next morning to revisit Mr. Ashby's garden at Blackwood for a few hours, and see, in addition to old friends, a small party of the Fire-tailed Finch (Zonæ-ginthus bellus) feeding on some newly dug soil. Meanwhile some of my future shipmates met with an Oystereatcher and other waders on the shore at Port Adelaide, but I did not hear of this in time to join them.

The return journey to England was more remarkable for the watch kept for the 'Emden' and 'Königsberg' than for ornithological experiences. We had, however, a day in the primeval scrub at Perth, in Western Australia, among the oldworld Cycads and the peculiar Kangaroo's-paw plant, which was in full flower, but met with no birds that we identified positively in the short time at our disposal. On the actual voyage we were accompanied for a time by the Wandering, Black-browed, White-capped, Yellow-nosed, and Sooty Albatrosses (Diomedea exulans, D. melanophrys, D. cauta, D. chlororhynchus, and Phabetria palpebrata), the Cape Petrel (Daption capensis), the Mutton Bird (Puffinus brevicaudus), Wilson's Petrel (Oceanites oceanicus), and no doubt other species which I did not observe personally. Crested Terns, Bridled Terns, Gulls (Pacific and Silver), and the Common Cormorant were noticed as we left Fremantle: and a Frigate Petrel (Pelayodroma marina) was caught on board later and identified. Tropic-birds, Frigate-birds, and Black Kites belong to the part of our journey nearer to Colombo and the few migrants that boarded us chiefly occurred in the Mediterranean, while no birds were seen that are not usually encountered by the traveller through those seas in autumn. In mid-October we landed safely in England.